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§ 21. Emendation of the Genus Fendlera.

By Edward Lee Greene.

Last September, while exploring the highest rocky summits of the San Francisco Mountains of South-eastern Arizona, I came upon some bushes growing in the rocky crevices, and the first sight of which called forth the exclamation: " A second species of *Fendlera!*"

With the typical species of that genus the shrub was indeed considerably at variance. The flowers instead of being solitary were in small cymes; the petals were five instead of four; and the filaments were merely subulate, lacking those linear lobes which, in *F. rupicola*, are produced beyond the anthers. I was nevertheless very confident that the supposed new species would have to go into *Fendlera*, although the published character of the genus would need modification in order to admit it. Without giving the plant further study, I labeled my specimens *Fendlera cymosa*, n. sp., and so distributed a number of them among my correspondents. Familiar as I am with the types of both *Fendlera* and *Whipplea*, and knowing that there had been a second species from Utah added to the latter genus within a few years, it never occurred to me that my Arizona shrub could possibly be a *Whipplea*, until one of my correspondents wrote: "I recognize in your *Fendlera cymosa*, Mr. Watson's *Whipplea Utahensis*." On receiving this somewhat mortifying bit of intelligence, I brought forth my best specimens of the two genera, and, with the original descriptions and plates before me, commenced a critical study of all the materials; the result of which is, a settled conviction corresponding with my first impression, that the *Whipplea Utahensis*, Wats. is not of that genus, but a *Fendlera*; and in accordance with that conviction I subjoin an emendation of the original characters of *Fendlera*, with descriptions of the two species, fully confident that if my esteemed friend Mr. Watson had been very familiar with *Whipplea modesta* and *Fendlera rupicola* in their native haunts, and had been favored with good specimens of this in some respects intermediate species, he would unhesitatingly have placed it in *Fendlera*.

FENDLERA, Engelm. & Gray. *Pl. Wright.* I., 77.

Calyx green-herbaceous, the turbinate tube 8-10-costate, more or less adherent to the ovary, limb of 4-5 lanceolate segments, valvate; petals 4-5, unguiculate, erose, convolute in bud; stamens 8-10, inserted with the petals, filaments broad and flat, anthers 2-celled, introrse; styles 3-4, stigmas simple; ovary semi-superior, 3-4-celled, with 1 to several ovules in each cell; ovules pendulous, anatropous; capsule crustaceous, ovoid- or oblong-conical, more or less adherent to the calyx-tube, splitting from the apex, the divisions pointed with the persistent style; seeds with a loose, membranous, reticulated testa, which is winged at the base.

Erect, much-branched, rigid shrubs, with opposite, entire, subsessile, deciduous leaves; the branchlets terminating in a solitary flower, or in a cymose cluster.

Natives of the arid, rocky districts of the South-western United States, east of the Sierra Nevada.

§ 1. EUFENDLERA. *Flowers solitary or in threes, 4-merous; filaments linear, with two linear-attenuate lobes which are produced beyond the anthers; cells of the capsule several-seeded.*

FENDLERA RUPICOLA, Engelm. & Gray.—Shrub 3-6 feet high; leaves lanceolate, about an inch long; hairs of the upper surface of the leaves very short, stout and erect, of the lower, long and appressed; flowers large and mostly solitary at the ends of the branchlets; calyx-tube short-turbinate; segments triangular-lanceolate; petals ovate-deltoid, with a long claw, deciduous; stamens 8; styles 4; ovary 4-celled; capsule ovoid, the calyx-tube adherent only to its base.

A beautiful shrub of the mountains of Texas and New Mexico, putting forth in May a profusion of large, white or rose-colored flowers, which give it the aspect of a small peach-tree.

§ 2. FENDLERELLA. *Flowers in compound cymes, 5-merous; filaments broadly subulate; cells 1-seeded.*

FENDLERA UTAHENSIS.—Shrub 6 inches to 2 feet high, much branched; leaves oblong, attenuate to the base; sparingly long-hairy, 3-nerved; flowers small, in a compound cyme; calyx cylindrical-turbinate, the lobes subulate; petals oblong, unguiculate, white; stamens 10; styles 3, stigmatic portion on the inner side, near the summit; capsule oblong, adherent to the calyx-tube for half its length.

Whipplea Utahensis, Watson, *Amer. Nat.*, vii., 300, and *Bot. Calif.* i., 203. Inhabiting dry rocky mountain summits of Utah and Arizona.

While *F. Utahensis* certainly brings the genera *Whipplea* and *Fendlera* into closer juxtaposition, it does not at all invalidate the former, which still rests upon good characters of its own, that are to be sought chiefly in the calyx, capsule and seed. Its calyx, instead of being green and of a sub-coriaceous thickness of texture, is thin and whitish; the calyx-tube is hemispherical, rather than turbinate; its capsule is nearly globose; its seeds are not winged; its petals are imbricated in the bud, and have the margins involute, while both species of *Fendlera* have a convolute aestivation, and petals with erose margin. *Whipplea* has, moreover, a centripetal inflorescence; the flowers being mostly opposite in a long-peduncled raceme; and, in habit, as well as from a geographical point of view, it is most unlike *Fendlera*. It is a weak, half-reclining undershrub of the deep, moist woods of the Coast Range of California. Both *Fendlerae* are rigidly erect, brittle, hard woody shrubs of the dry, sun-burnt rocks of the interior desert regions of the South-west.

§ 22 Some New Species of North American Fungi.

By J. B. ELLIS and H. W. HARKNESS, M.D.

ASCOMYCES ANOMALUS, E. & H.—Albus, orbicularis vel subconfluens; ascis oblongo-cylindraceis sporida octo oblonga hyalina foventibus.